

(12) United States Patent

Roeder

SEGMENT

(54) ENDOLUMINAL PROSTHESIS COMPRISING A VALVE AND AN AXIALLY EXTENDABLE

(71) Applicant: COOK MEDICAL TECHNOLOGIES

LLC, Bloomington, IN (US)

Blayne A. Roeder, Bloomington, IN Inventor:

(US)

Assignee: COOK MEDICAL TECHNOLOGIES

LLC, Bloomington, IN (US)

Subject to any disclaimer, the term of this patent is extended or adjusted under 35

U.S.C. 154(b) by 0 days. days.

Appl. No.: 15/434,845

(*) Notice:

(22)Filed: Feb. 16, 2017

Prior Publication Data (65)

> US 2017/0156856 A1 Jun. 8, 2017

Related U.S. Application Data

- (62) Division of application No. 13/793,726, filed on Mar. 11, 2013, now Pat. No. 9,744,032.
- (51) **Int. Cl.** A61F 2/24 (2006.01)A61F 2/82 (2013.01)A61F 2/07 (2013.01)
- (52) U.S. Cl.

CPC A61F 2/2412 (2013.01); A61F 2/07 (2013.01); A61F 2/2418 (2013.01); A61F 2230/0071 (2013.01)

Field of Classification Search CPC A61F 2/06; A61F 2/24; A61F 2/82; A61B

17/11

US 9,987,131 B2 (10) Patent No.:

(45) Date of Patent:

Jun. 5, 2018

USPC 623/1.11–1.2, 1.27–1.31; 606/153–156 See application file for complete search history.

(56)References Cited

U.S. PATENT DOCUMENTS

2003/0176911 A1 9/2003 Lancea et al. 2012/0158026 A1 6/2012 Behan 2014/0243965 A1 8/2014 Benson et al.

FOREIGN PATENT DOCUMENTS

WO WO2005/011535 2/2005 WO WO2011/109801 9/2011

OTHER PUBLICATIONS

Extended European Search Report for EP14275036 dated May 15, 2014, 7 pgs.

Office Action for EP14275036.3 dated Oct. 31, 2016, 5 pgs. Response to Rule 69 EPC Communication filed Mar. 17, 2015 for European Patent Application No. 14275036.3, 18 pgs. Examination Report for EP14275036.3 dated Oct. 12, 2017, 5 pgs.

Primary Examiner — Yashita Sharma (74) Attorney, Agent, or Firm — Brinks Gilson & Lione

(57)ABSTRACT

The present embodiments provide a prosthesis comprising first and second segments, and an axially extendable segment coupled to the first and second segments. A valve is coupled to at least one of the axially extendable segment or the second segment. The axially extendable segment comprises a first state in which the valve at least partially overlaps with the first segment, and the axially extendable segment comprises a second state in which the valve lacks an overlap with the first segment.

13 Claims, 5 Drawing Sheets

